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AGO, d/a ltr, 29 Apr 1980

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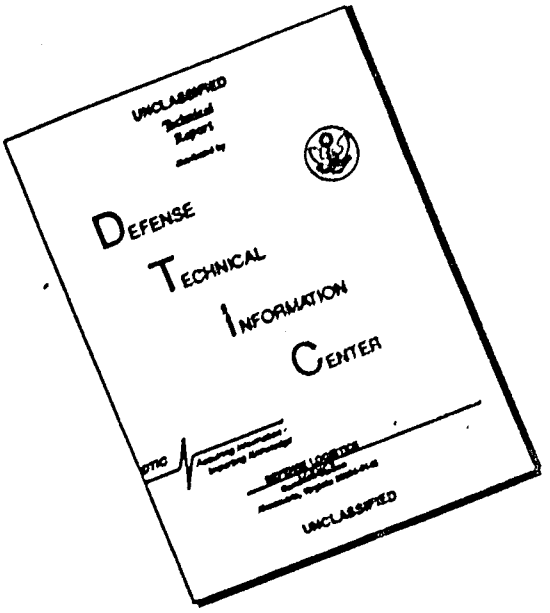

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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

IN REPLY REFER TO
AGAM-P (M) (18 Apr 68) FOR OT RD 681227 29 April 1968

SUBJECT: Operational Report - Lessons Learned, Headquarters, 62d Engineer Battalion, Period Ending 31 January 1968 (U)

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1. Subject report is forwarded for review and evaluation in accordance with paragraph 5b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT RD, Operational Reports Branch, within 90 days of receipt of covering letter.

2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 62nd ENGINEER BATTALION
APO 96491

EGBC-3 31 January 1968

SUBJECT: Operational Report-Lessons Learned (RCS CSFOR-65) for Quarterly Period Ending 31 January 1968

THRU: Commanding Officer
159th Engineer Group
ATTN: EGB-3
APO 96491

Commanding General
20th Engineer Brigade
ATTN:: AVBI-OPN
APO 96491

Commanding General
USA Engineer Command Vietnam (Prov)
ATTN: AVCC-P&O
APO 96491

Commanding General
United States Army Vietnam
ATTN: AVHGC-DH
APO 96375

Commanding General
United States Army Pacific
ATTN: GPOP-OT
APO 96588

TO: Assistant Chief of Staff for Force Development
Department of the Army
Washington, D.C. 20310

SECTION 1, SIGNIFICANT ORGANIZATION OR UNIT ACTIVITIES

1. COMMAND:

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SECTION 1, SIGNIFICANT ORGANIZATION OR UNIT ACTIVITIES (CONT'D)

a. UNIT EMPLOYMENT: The 62d Engineer Battalion (Construction) is located in the Long Binh Complex, Republic of South Vietnam. The Battalion was commanded by LTC Robert E. Crowley until 10 December 1967 at which time he became Executive Officer of the 79th Engineer Group in South Vietnam. LTC Howard D. Burtchett assumed command at that time.

b. MISSION: The mission of the 62d Engineer Battalion is in accordance with the mission of a construction battalion as stated in TOE 5-115E.

c. AREA OF RESPONSIBILITY: The battalion's area of responsibility includes portions of Long Binh Post, the Bien Hoa Complex, the Saigon Military District, and LOC construction south of Saigon on QL 4 and east of Bien Hoa on QL 1.

d. ATTACHMENTS OR DETACHMENTS:

(1) The 143d Engineer Detachment HO (Concrete Mixing and Paving) is attached to the battalion and is under the operational control of Company A. The unit is organized under TOE 5-500C w/C 22 (TOE 300-32) with an authorized strength of 1 officer and 26 EM.

(2) The Quarry Section of the Equipment Platoon, Company A, plus one cook from A Company and one medic from Headquarters Company are attached to Company A, 92d Engineer Battalion (Construction) for quarters, rations, and operational control. The section is utilized in support of the Nom Tam Quarry.

2. PERSONNEL, ADMINISTRATION, MORALE, AND DISCIPLINE:

a. The personnel strength of the 62d Engineer Battalion (Construction) and attached unit was as follows:

30 November 1967	OFF	WO	EM	TOTAL
Authorized:	32	7	893	932
Assigned:	33	6	828	867
31 December 1967				
Authorized:	32	7	893	932
Assigned:	29	6	808	843
31 January 1968				
Authorized:	32	7	893	932
Assigned:	31	6	815	852

SECTION 1, SIGNIFICANT ORGANIZATION OR UNIT ACTIVITIES (CONT'D)

a. During this period the battalion was short many key personnel. In the enlisted ranks an average shortage of ten 51H40 (E-6) vertical construction foreman was the most critical area. In addition the battalion has been without a surgeon and a personnel officer for approximately one month. The lack of a battalion maintenance officer during the month of December has been a factor in the battalion's rising deadline rate.

b. There have been 76 extensions of tours of duty in Vietnam for this reporting period. These extensions continue to provide the battalion with well trained and experienced personnel. This is an increase of 33 extensions over the last reporting period.

c. The 62d Engineer Battalion (Construction) received an average of 70 Rest and Relaxation leaves each month. 90% of these leaves were utilized by the battalion. The battalion received one R&R to Vung Tau each month.

d. The battalion has an incentive awards program whereby the outstanding soldier, driver, mechanic, and equipment operator of the month are given priority on the in-country R&R allocations. An additional three allocations per month could be effectively utilized for this purpose.

e. Morale within the battalion remained high during the reporting period. Several special floor shows provided by the Sundry Fund, the showing of free movies five nights per week, and a recreational program supplemented with a half a day off during the week for each EM have sustained a high espirit de corps. Command emphasis has been given to good working and living conditions. The battalion continued the Best Platoon of the Week, Best Company Mess of the Month, and Best Company of the Month programs. These competions have enhanced unit integrity.

f. The number of disciplinary actions increased from those of the last reporting period. The battalion had six Special Courts-Martial, five Summary Courts-Martial, and 123 Article 15's during this period. Command emphasis at the lowest unit level is being placed on continued orientation of all personnel.

3. AWARDS AND VISITS:

a. During the reporting period, men of the battalion have been awarded sixteen Bronze Star Medals and five Army Commendation Medals for meritorious service by the United States Army Engineer Command Vietnam (Prov) and 29 20th Engineer Brigade Certificates of Achievement.

b. On 10 December 1967, the battalion had the change of command ceremony in which LTC Burtchett assumed command from LTC Crowley.

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SECTION 1, SIGNIFICANT ORGANIZATIONAL UNIT ACTIVITIES (CONT'D)

c. Brigadier General Chapman awarded the 6th Engineer Battalion (Construction) the 20th Meritorious Unit Commendation in a ceremony held on 15 [illegible]. The commendation covers the period 1 April 1966 to December 1967 and was awarded for exceptionally meritorious achievement in the performance of outstanding service in providing construction support in the vicinity of Nha Trang, Republic of South Vietnam.

d. Brigadier General Chapman, Commanding General, 20th Engineer Brigade, visited the battalion and the major construction projects on 25 January 1968. He was briefed on project progress at each major work site.

4. INTELLIGENCE AND COUNTERINTELLIGENCE:

a. The combat intelligence function of the battalion has been relatively minor due to the primary emphasis on construction in relatively secure areas. Battalion intelligence has been restricted primarily to analysis of project sites to improve design and construction. Intelligence information is obtained on a daily basis from Second Field Forces Vietnam (II FFV) SITREP.

b. Intelligence information was received from subordinate units operating in Ben Luc, QL 1 and the laterite pit and immediately forwarded to S-2, 159th Engineer Group.

5. PLANS, OPERATIONS, AND TRAINING:

a. Plans: This battalion developed one bridge destruction contingency plan during this reporting period.

b. Operations:

(1) Combat Support: This battalion supported the 48th Transportation Group with two 2½ ton truck drivers for the period 13 December 1967 through 22 December 1967 and supported the 43d Dump Truck Company with five 5 ton dump truck drivers for the period 17 December 1967 through 18 December 1967.

(2) Operational Data:

(a) During this reporting period, the battalion was actively engaged in construction activities 85 days.

(b) Weather throughout this reporting period has been good to excellent. The following amounts of precipitation were recorded this period: November - 5 inches; December - 0.12 inches; January - 0.00 inches.

SECTION 1, SIGNIFICANT ORGANIZATION OR UNIT ACTIVITIES (CONT'D)

(3) Project completed this period:

(a) Operational support:

[1] Test Fire Range, Group Directive 195-192. This project consisted of constructing a 100' firing line and berm to be used for firing 30 caliber machine guns. Project was completed 27 December 1967.

[2] Helicopter Landing Area, 199th Infantry Brigade, Group Directive 159-21[illegible]. This project consisted of constructing a helicopter staging area approximately 600'x700' and applying a dust pallative. Project was completed 30 January 1968.

(b) Lines of Communication:

[1] Rehabilitation of QL 15, Group Directive 159-151. This project consisted of upgrading 3.7 miles of highway and paving to meet MACV Standards. Project was completed 7 November 1967.

[2] Upgrading Highway 317, Command Directive 98-201-15-T-MA. This project orginally consisted of ungrading 3.5 miles of Highway 317 to meet MACV Standards and surface with a double surface treatment. It was later changed to upgrading to meet MACV Standards and prepare for paving. This project also included placing two 48" culvert, 60' in length across the highway to facilitate drainage. Project was completed 1 January 1968.

[3] Bridge Upgrading, QL 4, Command Directive 73-217-15-T-MA. This project consisted of removing two tactical bridges and replacing them with permanent steel bridges (40' and 80') and rebuilding the superstructure for three other bridges ranging in length from 70' to 140'. All bridges had security wiring installed for abutment and wing wall protection. Project was completed 28 January 1968.

(c) Base Development:

[1] MER for 39th Base Post Office, Group Directive 159-147. Project consisted of constructing a road network, one 70'x140' pad, and one 40'x100'pad. Project was completed 28 October 1967.

[2] 101st Airborne Division Wiring, Group Directive 159-201. This project consisted of electrical rewiring of 12 buildings within the 101st Airborne Division Cantonment Area. Project was completed 11 January 1968.

SECTION 1, SIGNIFICANT ORGANIZATION OR UNIT ACTIVITIES (CONT'D)

[3] Water Storage Tank, Dispensary, Dental Clinic, Group Directive 159-215. This project consisted of construction of a 3000 gallon water tower, with a 3000 gallon collaspible tank. Project was completed 23 January 1968.

[4] Guard Towers for LB ASD, Construction Directive 20-002-67. This project consisted of constructing 12 guard towers complete with lightning protection system. Project was completed 17 November 1967.

[5] Long Binh Post Amphitheater, Command Directive 43-229-01-T-6S. This project consisted of constructing a 3000 seat amphitheater using existing terrain, erection of a 30'x70' stage with canopy, construction of a 20'x50' wood frame dressing room, and a road network with parking areas. Project was completed 23 December 1967.

[6] Administration Building, 44th Signal Battalion, Command Directive 43-293-14-T-6S. This project consisted of construction of a laterite pad and erection of a 20'x48' Pascoe Building by self-help. Project was completed 15 January 1968.

[7] Install Water Storage Tanks, Command Directive 43-286-01-T-MA. This project consisted of construction of two 10,500 gallon bolted steel tanks and connecting service to the 163d Concrete Detachment Batch Plant. Project was completed 2 December 1967.

[8] POL Laboratory, Command Directive 43-216-06-T-6S. This project consisted of construction of a 20'x96' laboratory building and a 3000 gallon water tower with water tank. Project was completed 20 January 1968.

[9] EM/NCO Club, 62d Engineer Battalion Directive 64-62E-67. This project consisted of construction of a standard 500 man mess hall with patios. Project was completed 23 November 1967.

(4) Projects under construction during this reporting period:

(a) Operational Support:

[1] 55 Gallon Drums Filled with Laterite for Airfield Revetments, Group Directive 159-213. 1,037 drums were supplied this reporting period, and 3,581 drums have been shipped to date. Project is continuing.

SECTION 1, SIGNIFICANT ORGANIZATION OR UNIT ACTIVITIES (CONT'D)

[2] 101st Aviation MER, Group Directive 159-210. This project consisted of constructing five parking aprons, a landing strip, and parking space with protective revetments for 79 helicopters. A 4900' berm and bunker complex will be relocated. Project is 4 percent complete.

[3] Command Bunkers for 6/56 Arty, Group Directive 159-198. This project consists of constructing three 20'x24' bunkers. Two of these bunkers are complete. Project is 67% complete.

(b) Lines of Communication:

[1] QL 1 Bridge, Group Directive 159-206. This project consists of constructing a single lane, 60' span bridge, Project is 67 percent complete.

[2] QL 1 Rehabilitation, Group Directive 159-206. This project consists of upgrading 22 miles of highway to meet MACV Standards and prepare for paving. Project is 45 percent complete.

[3] Precast Concrete Bridge Beams, Group Directive 159-138. This project consists of construction and pouring concrete beams and curbs in 15 foot and 20 foot lengths in support of LOC construction. This project is continuous.

(c) Base Development:

[1] Heliport Construction, Command Directive 43-214-02-T-6S. The second of the three parking aprons including helipads and protective revetments for UH-1 Helicopters is completed. The third parking apron was completed but revetments are not yet completed. This project will provide pads and revetments for 61 UH-1 helicopters and 9 CH-54 flying crane helicopters, and includes construction of a 2500' airstrip. Project is 80 percent complete.

[2] Aviation Support Facilities, Command Directive 43-217-03-T-6S. This project includes the maintenance facilities, storage facilities, and operations facilities for the USARV Heliport at Long Binh. Construction of 1 hanger, 1 warehouse, 1 tech supply, and 2 administration buildings were completed during this period. Project is 71 percent complete.

[3] Dispensary, Command Directive 43-210-01-T-6S/7S(B). This project consists of constructing a 4000 square foot dispensary for the Quarter Master Cantonment area. Project is 15 percent complete.

SECTION 1, SIGNIFICANT ORGANIZATION OR UNIT ACTIVITIES (CONT'D)

[4] Outdoor Recreational Facilities, Command Directive 43-280-01-T-7S(B). This project consists of construction of two softball fields, three tennis courts, four basketball courts, and twenty volleyball courts. Project is 4 percent complete.

[5] Erosion Control, USARV HQ, Command Directive 43-254-01-T-MA. This project consists of reshaping the slopes north and west of USARV HQ to form 100' wide terraces to prevent erosion. Project is 77 percent complete.

[6] General Officer's Quarters, Command Directive 43-222-01-T-6S(B). All eleven General Officer's Quarters for USARV HQ at Long Binh are completed. The water distribution system and water borne sewage system are completed. The sidewalks are 98% complete.

[7] 101st Airborne Road and Helicopter Landing Area Repair, Construction Directive 20-001-68. This project consists of rehabilitation as required and application of dust palliative on roads and helicopter landing area for the 101st Airborne Division. This project is 10 percent complete.

[8] Laterite Pit Operations. During this reporting period 351,550 cubic yards of laterite were issued to units in the Long Binh Area. This project is continuous.

[9] Mess Hall Construction, Group Directive 159-78 W/change 4. The scope of this project has been increased to include the installation of mess service equipment. Project is 75 percent complete.

[10] Prefabrication Operations, Group Directive 159-88. This project consists of prefabrication of water and guard towers in support of other units. Project is continuous.

[11] Electrical Wirng. Group Directive 159-66. This project consists of wiring buildings constructed through self-help on 1/3 of Long Binh Post. This project is continuous.

[12] Batch Plant, Group Directive 159-95. During this period 9,931 cubic yards of concrete were issued to units in the Long Binh area. This project is continuous.

[13] Road Maintenance and Dust Control, Group Directive 159-118. This project consists of construction of ditches, culverts, and headwalls and applying dust palliative as recuired on roads in the battalion area of responsibility on Long Binh Post. This project is continuous.

SECTION 1, SIGNIFICANT ORGANIZATION OR UNIT ACTIVITIES (CONT'D)

(d) Rural Development Support: Group Directive 159-217, Hamlet Schools. This project consists of constructing four hamlet schools in Long An Province. Project is 2 percent complete.

(5) On 14 December 1967, this battalion was given the mission of mine sweeping and clearing weekly along the Bien Hoa By-pass from Highway 1A to Bien Hoa Army Post gate, a distance of 2.8 miles.

(6) With the projects currently assigned, this battalion will have enough horizontal and vertical construction for full commitment through the month of April 1968.

(7) During this period, the large increase in LOC construction included major efforts in hazardous areas along QL 1 and QL 4. This required diversion of a significant manpower effort to provide security of work sites since adequate security forces were not avaliable from other sources.

(8) This battalion's heavy emphasis on horizontal construction projects has highlighted a problem area in providing an adequate supply of water required for achieving optimum moisture content for compaction during the dry season. This problem results from a shortage of water distributors and lack of adequate pumping capability to insure a rapid turn around time in the refilling of these distributors. The TOE 1000 gallon water distributors have too small a capacity. At least 3000 gallons is required for a reasonably continuous support of compaction effort. This deficiency has been overcome by fabricating 3000 gallon storage capacity distributors with appropriate plumbing using salvaged navy cubes on 25 ton low bed trailers. The 100 gpm pumps provided by the TOE should be replaced by pumps of at least 250 gpm capacity to permit rapid filling of these distributors.

(9) A related problem exists in the lack of sufficient compaction equipment in each construction company to properly compact the fill that can be hauled to a job site if all of that unit's 16 cubic yard scrapers and 5 ton dump trucks are used. The 2 sheepsfoot rollers which are the primary compaction equipment in each company are inadequate for projects such as the USARV Heliport Complex and the 101st Heliport being constructed by this battalion which require compaction of large amounts of fill. The addition of 2 more sheepsfoot rollers to the TOE of each line company would alleviate this problem.

(10) Due to dispersion of construction effort on LOC and RDS projects, equipment and supply support has been more difficult but has not prevented timely completion of projects.

SECTION 1, SIGNIFICANT ORGANIZATION OR UNIT ACTIVITIES (CONT'D)

c. Training: Training was conducted during this period of 13 Sunday mornings for a total of 64 days of training time. Mandatory DA and USARV subjects were presented during two hours of these training periods. The remainder of each morning was devoted to maintenance of equipment.

5. LOGISTICS:

a. In general, logistical support on construction material has been good during this reporting period. Support from the 159th Engineer Group in assisting the battalion has been excellent. Logistical support received from the Engineer Construction Material Yard (Saigon) Stock Control personnel has been very good. Occasional shortages of electrical items hampers timely completion of projects. Items short at present include duplex receptables, toggle switches and flourscent light fixtures.

b. This unit has not been receiving the quarterly reconciliation of requisition from the 266th Supply and Service Battalion as specified by USARV Regualtion 700-9, paragraph 4a(3). One reconciliation has been received during the past seven months and this was in the format of pre-punch cards. Each individual card required the Commanding Officer's signiture if requisition was to be continued. This process is very time consuming for the requisitioner. The reconciliations received from the Engineer Construction Material Yard are run sheets on all valid requisitions in chronological order which is much faster to reconcile with the requisitioners register. In addition, a one-digit notation beside each entry is all that is required for reconciliation.

c. This unit is short items of TOE equipment which considerably hinders the accomplishment of its mission. The items listed below have been due out to this organization for over 300 days and were noted on the ORLL in August 1967.

FSN	NOMENCLATURE	AUTH	O/H	MILSTRIP #	QTY
3431-287-5404	Welding shop cgo, trlr mtd, 300 A	6	4	AT8033802801 48*	2
3220-270-8630	Shop equip woodworking base maint	6	4	AT8033802801 49*	2
3820-958-8584	Pneumatic tool & compressor outfit, 250 cfm	7	2	AT8033704901 87	5
3810-887-7060	Crane-shovel 10 ton	2	0	AT8033709200 20	2

*NOTE: Previous requisitions dated 7048, were cancelled by depot o/a 8027.

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SECTION 1, SIGNIFICANT ORGANIZATION OR UNIT ACTIVITIES (CONT'D)

d. The shortage of items listed below has also hampered construction progress in this unit:

FSN	NOMENCLATURE	AUTH	O/H	MILSTRIP #	QTY
3431-691-1415	Welding set, inert gas shld DC 115V	4	0	AT803372470327	4
3825-629-5901	Distributor wtr tk trk mtd, 1000 gal	6	3	AT803372200282	1
				AT803373040027	1
				AT803380260146	1
6230-299-5642	Floodlight set, elect Port mst mtd	26	20	AT803372210360	6
6115-074-8830	Generator set, GED 5 KW 60cy	27	12	AT803372210342	3
				AT803373320069	7
				AT803373500128	1
				AT803373530019	4
5820-082-3491	Radio Set AN/GRC-106	6	0	AT803372930092	5
				AT803373660038	1
3815-554-0083	Adptrs pile drvr lead crane shvl trk mtd 20T	6	0	AT803372520223	6
3815-313-2599	Fairlead attachment, crane shvl trk mtd 20T	6	0	AT803372510242	6
3895-223-8840	Cap wood pile for 3000 lb hammer	7	1	AT803373600172	6
3895-190-3308	Catwalk, piledriver telescope 3 sect 8-23'	7	0	AT803373490395	7
3895-221-1771	Hammer piledriver drop 3000 lb	2	1	AT803380190270	1
3895-014-0583	Hammer piledriver self-pwd, 7500 lb	7	0	AT803372210349	7
3815-221-2215	Lead section lower pile-driver 10' lg	14	0	AT803373490392	14
3815-983-8029	Lead section top pile-driver 15' lg	6	0	AT803373490393	6

6. MAINTENANCE:

a. Deadline rates started rising in late December and January. Shortage of parts, particulary tires, tubes, and patches, and 24 hour-a-day utilization of equipment were significant factors in the increase. This additional usage of equipment emphasizes the need for a more conscientious program of preventive maintenance to detect and correct trouble areas before they cause a deadline. Deadline rates, while rising, are still below Command Expectance rates for the reporting period. The following percentages were achieved:

SECTION 1, SIGNIFICANT ORGANIZATION OR UNIT ACTIVITIES (CONT'D)

	MAJOR ITEMS (10%)	OVERALL ITEMS (5%)
November	8.5%	3.2%
December	8.3%	3.5%
January	9.6%	4.7%

b. The following chart reflects "Deadline for Parts" data on three of the most critical items of equipment in the 62d Engineer Battalion, for the 14 week period from 4 November 1967 to 3 February 1968:

ITEM	AUTH	OH	POSSIBLE VEH WEEKS	WEEKS LOST	TIME LOST	MAJOR REASONS
Truck, 5 ton Dump	48	42	602	69	11.5%	Engines, Bell housings crackes frames, clutches.
Loader, Scoop	9	8	112	33	29.4%	Hydraulic systems
Tractor, Ft D7E	14	14	196	27	13.7%	Engines and tracks

c. This reflects the percentage of the unit's possible output which was lost due to the parts shortage. The shortage is not unique to the unit level, but is noticeable in the third and fourth echelons of support. The Red Ball Express system helps the parts situation but has been haphazard at times in filling requisitions in the order in which they are requisitioned.

7. FORCE DEVELOPMENT: During this reporting period, a task force was organized to move to the Delta Region of South Vietnam. This force accomplished a bridge restoration program on QL 4, consisting of repairing and replacing essential bridges along this route. Upon completion of this program, the task force was further modified with the major portion returning to the battalion area. The remaining group is presently working to aid the Vietnamese people by providing construction support to the Revolutionary Development Program.

8. COMMAND MANAGEMENT:

a. An operations meeting is held daily with the battalion and company operations personnel to cover the day's activities, schedule the following day's work, and allocate equipment resources to each company.

SECTION 1, SIGNIFICANT ORGANIZATION OR UNIT ACTIVITIES (CONT'D)

b. The battalion's activities are presented through use of planning and scheduling charts. These charts were developed so that an up-to-date record can be kept of the status of projects assigned, commitments, availability of manpower, timely emphasis of effort on projects not on schedule, and future programming of available effort.

c. Staff meetings of commanders and staff sections are scheduled twice a week to cover all aspects of the battalion activities. Nonscheduled meetings are conducted as required.

d. During this reporting period, general specifications for project quality control were developed and implemented. These cover all aspects of engineering construction and are used by the companies as guidelines in their construction projects.

e. Pre-IG Inspections of all subordinate units were conducted by the battalion staff to determine the condition of each unit and to specify areas requiring improvement.

9. INSPECTOR GENERAL: The battalion has an acting Inspector General for the purpose of receiving and processing compliants. Three complaints were reported this period. All were minor in nature and were resolved at the unit level.

10. INFORMATION: Information activities of the battalion are primarily focused on home town news releases and feature stories of local construction activities. Continuous emphasis was placed on photographic coverage. One feature story per day is submitted to the 159th Engineer Group Public Information Officer (PIO).

11. CIVIC ACTION:

a. During this reporting period the Chaplain delivered clothing and soap to war orphans of Mrs Phung-Ngoc-Duy (Vietnamese Woman's Association) in Saigon. School supplies were provided to the Nu-Tu Domina Covent and School in Ho Nai.

b. A Christmas party was held for the Vietnamese personnel working for the battalion and gifts passed out to their childern.

c. Technical assistnace was provided in the hamlet of Vinh Cuu for the construction of a warehouse. The road network in the village was also improved.

d. In the village of Ben Luc, a bus stop and turn-around was constructed for use by the village.

SECTION 2, [illegible] OBSERVATIONS (LESSONS LEARNED)

1. PERSONNEL:

ITEM: R&R Utilization

DISCUSSION: Each battalion receives allocations for the various locations where R&R may be taken at different time periods during each month. Many times the available allocations and requested locations and dates do not coincide, but by close coordination between battalions, the needs of the individual soldier can be satisified, both as to date and location desired.

OBSERVATION: Maximum effective utilization of R&R allocations has been obtained by trading R&R allocations among battalions.

2. OPERATIONS:

ITEM: Concrete Slab Protection

DISCUSSION: To protect concrete slabs from being ruined by unexpected monsoon downpours, it has become standard practice to have prefabricated wooden trusses and canvas on the job site prior to beginning a concrete pour. The trusses are designed such that there is sufficient room for a concrete finisher to work between the canvas and the concrete.

OBSERVATION: Proper forethought can permit construction to progress through the rainy season.

ITEM: Horizontal Construction During Rainy Weather

DISCUSSION: To make maximum utilization of earthmoving equipment during rainy weather, it has been found best to use all available equipment for filling and establishing as much drainage as possible during dry periods. Once a laterite cap with enough slope to drain is constructed, rain will not seriously hinder the project for more than short periods of time. If the area is bladed lightly several hours after a rain, filling can be resumed. If it rains sufficiently long and hard to seriously deter the filling operations, all scrapers and dozers can be moved to a cutting operation. Of course the efficiency of the operation is not 100% due to the fact that rubber tired vehicles are somewhat immoble in mud. However, the use of dozers to push the pans alleviates this problem. After several hours, generally the area has been cut down to a fairly stable material and efficiency begins to improve.

OBSERVATION: Fill and establish drainage during dry periods, and cut during time when it is too wet to fill.

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SECTION 2, PART I, OBSERVATIONS (LESSONS LEARNED) (CONTD)

ITEM: Retaining Wall Footer

DISCUSSION: Due to the excessively unstable soil conditions of most of the streams in Vietnam, difficulty has been encountered in placing the footer for retaining walls. A solution to the problems of forming and pouring a concrete footer in soft mud or under several inches of water is through the use of a precast bridge beam. The bridge beams come in lengths of 15 and 20 feet and measure 18 inches in depth and 47 inches in width. The bridge beam is placed and set in by tamping it with a heavy object such as a filled clam shell bucket on a 20 ton crane. By drilling holes and grouting in short pieces of reinforcing steel, the bridge beam cam be tied into the retaining wall giving a retaining wall and footer of equal strength to a normal concete footer and wall.

OBSERVATION: The use of a precast bridge beam rather than a poured in place footer saves time and construction effort.

ITEM: Sandbag Finishing of Concrete

DISCUSSION: Several methods have been used recently in an attempt to provide a proper non-slip finish to concrete sidewalks being constructed in the Long Binh Area. One of the most effective has been the use of sandbags in a "drag" operation similar to the burlap finishing technique often used in bridge construction. Following concrete placement and screening, the sandbags are dragged across the surface creating a coarse, though not uneven finish.

OBSERVATION: The resulting surface has proven effective in preventing slippage during rainy periods.

ITEM: Priming for Asphalt Pavement

DISCUSSION: During recent road rehabilitation projects, several agents have been used in an effort to find the most suitable primer for use prior to asphalt pavement operations. MC-0, MC-1, and MC-2 have all proved effective, but a mixture of MC-0 and diesel fuel has provided the greatest benefits to date. The mix varies in proportion from 1/3 diesel to 2/3 MC to a 50/50 combination.

OBSERVATION: This priming agent has exhibited two significant qualities. First, it achieves a high penetration. This aids the second characteristic which is the "staying" capability of this primer. Even under moderate to heavy traffic, the diesel and MC has adhered to the surface and succeeded in reducing the dust problem on many job sites.

SECTION 2, PART I, OBSERVATIONS (LESSONS LEARNED) (CONT'D)

ITEM: Defense Bunker for a Swampy Area

DISCUSSION: Movement to a hazardous area required speedy construction of defense bunkers. Since the only available area was swampy, it was necessary that the bunkers be at least 6' in height. Two rows of 55 gallon drums were placed 5'-6" apart. On the inside of each drum was set 2x4's with 4 inches rising above the top of the drum, allowing 1x4 to be placed lengthwise through the bunker and thereby provide support for the entire bunker in case a portion of it should be hit. The drums were filled with laterite and roofed with 72" CMP bolted together. Two feet of sandbags were placed along each row of drums. Another combination drum and sandbag wall was constructed two feet out from the entrance to protect the ends of the bunker.

OBSERVATION: The above is a speedy and effective manner in which to construct a defense bunker against mortars and light automatic weapons adjacent to living quarters in a congested or a swampy area. The sandbag portion of these bunkers could be sprayed with used oil to lengthen the life expectancy of the sandbags. Small benches could be constructed adjacent to the drums. At the end of the initial attack, troops can move immediately to perimeter bunkers to take up defense against enemy ground forces.

ITEM: Storage of Bituminous Material

DISCUSSION: During the dry season when asphalt distributors become a critical piece of equipment it is important to use them with maximum efficiency. Most nonproductive time involved is loading the distributor and moving from the storage area to the job site. This nonproductive time can be reduced by storing the bituminous material at the job site. This eliminates the haul time when a number of distributor loads are required.

OBSERVATION: Projects involving large quantities of bituminous material should be planned to allow storage of the required material at the job site. This will insure efficient utilization of the asphalt distributors.

ITEM: Use of Navy Cubes as Water Distributors:

DISCUSSION: The high demand for construction water during the dry season for compaction on the battalion's earthmoving projects and for use as a dust pallative in the road maintenance program has required water distribution capability which is much greater than the TOE equipment provides. To alleviate this situation, 6 improvised water distributors were fabricated using salvaged navy cubes as containers and connecting piping, valves, and spray bars to the cubes. Two of these cubes mounted on a 25 ton low bed trailer provides approximately 3000 gallons of water per load.

SECTION 2, PART I, OBSERVATIONS (LESSONS LEARNED) (CONT'D)

OBSERVATION: These fabricated water distributors have adequately filled the requirement for large quantities of water required for horizontal construction effort.

ITEM: Safe and Expedient Method for Installing U-Shaped Pickets for Barbed Wire.

DISCUSSION: During the installation of U-shaped pickets, used for barbed wire fencing, a sledge hammer was being used to drive the pickets. The sledge hammer was found to be unsafe and very cumbersome, thus a new method was devised. Working on the principle of a pile driver, a ram was fabricated which fitted over the top of the picket. This ram was lifted and dropped by hand. The ram is a steel cylinder with one end closed off. Handles were welded to the cylinder for easy handling.

OBSERVATION: This new method has greatly increased the production rate for installing barbed wire fencing. More important, accidents have been eliminated by banning the use of the sledge hammer for driving pickets.

ITEM: Furnace for Melting Lead

DISCUSSION: A melting furnace was constructed to facilitate the melting of lead used for installation of plumbing. The furnace consists of a 55 gallon drum and a 5 gallon oil can. The drum was cut in half with a false bottom installed 4 inches from the bottom of the drum. A 4 inch hole was cut in the side of the drum in the false bottom section. An airduct was installed around this hole, threw which a six inch fan blows air. A two inch hole was cut in the center of the false bottom and a 2 inch pipe, 4 inches long was welded over the hole. The 5 gallon oil can was cut in half with a 2 inch hole in the bottom. The can was placed on top of the 2 inch pipe. The remainder of the 55 gallon drum was filled with laterite to conserve the heat. The melting pot was constructed using a 6" to 4" reducer for POL pipe with a $\frac{1}{2}$" steel plate welded on the 4 inch end.

OBSERVATION: The construction of this unique melting furncae has made the melting of lead easier and quicker. With this furnace, melted lead is readily available.

3. Training and Organization: None

4. Intelligence: None

SECTION 2, PART I, OBSERVATIONS (LESSONS LEARNED) (CONT'D)

5. Logistics: None

6. Maintenance:

ITEM: Modification of Ignition System

DISCUSSION: In recent weeks, this unit has experience trouble with the magneto ignition system on the Gallion ten ton roller Mdl Roll O Matic and the Warco ten ton roller, Mdl E1012-M. Not being able to obtain the necessary magneto, FSN 2920-607-3491 through the supply channels, we started looking for other means to repair these rollers and keep a critical piece of equipment on the job. It was found that a five ton gasoline engine distributor, FSN 2920-294-3679, or a crane carrier engine distributor, FSN 2920-679-3425, would fit in place of the engine overspeed switch and function as the engine ignition system properly. A plate with necessary gaskets has to be manufactured to cover the opening where the magneto was mounted to keep from losing oil.

OBSERVATION: If this method is used to keep the roller on the job, the operators must be cautioned in the operation as one of the engine safety systems is omitted when the change is made.

ITEM: Air Filters, Tractor, F.T., D7-E

DISCUSSION: Fine dirt lodging between the top [illegible] of the dry type air filter and the air filter housing has resulted in the filter becoming lodged so tightly that it is almost impossible to remove. When an operator would attempt to pry the unit out, he would damage the element, and make it inoperable. If the unit is not cleaned, dirt drawn into the cylinders will ruin the engine by breaking the piston rings. Personnel from the battalion third echelon maintenance shop report that by using a small weight as a bumper on the inside top rim of the filter and tapping the outside with hammer, the filter is crimped so that it will not jam.

OBSERVATION: Due to the dusty climate encountered in Vietnam, it is vital that air filters be kept clean. This method makes it easier for an operator to clean the filter.

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SECTION 2, PART II, RECOMMENDATIONS

1. PERSONNEL: TOE 5-116E authorized a captain in the 4880 MOS as the Battalion Engineer Ecuipment Maintenance Officer. In view of the rapid promotion policy now in effect, a captain with adequate experience in the 4880 MOS field is virtually nonexistent. It is recommended that the captain's slot be replaced by a 4880 warrant officer. The use of a warrant officer will insure that this all-important position will be manned by qualified personnel, since in most instances, the warrant officer in the 4880 MOS has been drawn from experienced maintenance NCO's.

2. OPERATIONS: During the reporting period, the 62d Engineer Battalion was heavily engaged in horizontal construction to the extent that virtually all of its horizontal equipment was committed around the clock on a two-shift basis. On larger projects, such as the USARV Heliport, where vast quantities of fill material are required, 803,000 cubic yards total to date, the number of sheepsfoot rollers now authorized by TOE does not provide balance between lay down and compaction capabilities. The compaction equipment becomes a limiting factor, thus precludes obtaining maximum efficiency from the 290M tractors and 18 cubic yard scrapers. This imbalance becomes more critical as density requirements increase and where short cycle time for the haul equipment is available. It is recommended that the number of sheepsfoot rollers authorized by TOE 5-118E be increased from two to four.

3. TRAINING AND ORGANIZATION: None

4. INTELLIGENCE: None

5. LOGISTICS: None

6. OTHER: None

HOWARD D BURTCHETT
LTC, CE
Commanding

DISTRIBUTION:
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EGB-CO (31 Jan 68) 1st Ind
SUBJECT: Operational Report-Lessons Learned (RCS CSFOR-65) for Quarterly Period Ending 31 January 1968

DA, HQ, 159th Engineer Group, APO 96491 FEB 26 1968

TO: Commanding General, 20th Engineer Brigade, APO 96491

Forwarded for your information.

HARVEY C. JONES
Colonel, CE
Commanding

AVBI-OS (31 Jan 68) 2nd Ind
SUBJECT: Operational Report - Lessons Learned (RCS CSFOR-65) for Quarterly Period Ending 31 January 1968

DA, Headquarters, 20th Engineer Brigade, APO 96491 2 March 1968

TO: Commanding General, USAECV(P), ATTN: AVCC-P&O, APO 96491

1. Forwarded for your information and action IAW USAECV(P) Reg 1-19, dated 15 April 1967.

2. This headquarters concurs with the ORLL submitted by the 62nd Engineer Battalion, subject to the following comments:

a. Section 2, Part I, para 2c: This is a good idea if there is an excess of bridge beams available, though much more expensive than the construction of a plain concrete footer.

b. Section 2, Part II, para 1: Concur. MTOE action should be initiated by the unit.

c. Section 2, Part II, para 2: Concur. An even better piece of equipment would be a large, self-propelled compaction machine such as the Hyster Model C450A Embankment Compactor.

FOR THE COMMANDER:

CECIL D. CLARK
Major, CE
Adjutant

AVCC-P&O (31 Jan 68) - 3rd Ind
SUBJECT: Operational Report-Lessons Learned (RCS CSFOR-65) for Quarterly Period Ending 31 Jan 68

HEADQUARTERS, UNITED STATES ARMY ENGINEER COMMAND
VIETNAM (PROV), APO 96491 14 MAR 1968

TO: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST, APO 96375

The attached ORLL has been reviewed by this headquarters and is considered adequate except as follows:

a. Item concerning TOE Equipment, Section 1, paragraph 5d(9), page 9. Class IV equipment pools are being formed to provide engineer equipment on an as required basis.

b. Item concerning ignition system, Section 2, Part I, page 18. Nonconcur. This field fix eliminated a safety feature built into the engine. The elimination or removal of any component or assembly that affects safety operation constitutes a deficiency and places that equipment in an inoperable status. The overspeed switch is wired to the magneto and is designed to stop the engine when it reaches a critical speed. TM 38-750, paragraph 4-2c(1)(a) states "No one will authorize or direct that equipment be operated until the "X" status symbol (deficiency) is cleared".

c. Item concerning air filters, Section 2, Part I, page 18. Nonconcur. Lumping the top edge of the air filter may break the seal and allow air to bypass the filter element. Since 95% of all dirt is removed by the lower body of the air filter element the inability to remove the air filter element is an indication of improper and untimely servicing. In addition, unserviceable seals and gaskets (Figure Mec 2410-214-12/14, page 37, TM 5-2410-214-12) will allow "raw" air to pass directly to the air filter element and hasten the inability of the element to final filter the air.

d. Item concerning personnel, Section 2, Part II, paragraph 1, page 19. There is no MOS 4880 for warrant officers. The engineer equipment repair technician carries the MOS 621AC.

FOR THE COMMANDER:

John Mustonen 1LT, AGC
for RICHARD H BIRD
Captain, AGC
Assistant Adjutant General

Protective markings
Cancelled
1 Jan 1970

AVHGC-DST (31 Jan 68) 4th Ind 18 MAR 1968
SUBJECT: Operational Report-Lessons Learned (RCS CSFOR-65) for Quarterly Period Ending 31 January 1968

HEADQUARTERS, US ARMY VIETNAM, APO San Francisco 96375

TO: Commander in Chief, United States Army, Pacific, ATTN: G-OP-DT, APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 January 1968 from Headquarters, 62d Engineer Battalion (AC-XAA) as indorsed.

2. Concur with report as indorsed. Report is considered adequate.

3. A copy of this indorsement will be furnished to the reporting unit through channels.

FOR THE COMMANDER:

CHARLES A. BYRD
Major, AGC
Assistant Adjutant General

Copy furnished:
HQ, USAECV (P)
HQ, 62d Engr Bn

GPOP-DT (31 Jan 68) 5th Ind
SUBJECT: Operational Report of HQ, 62d Engr Bn for Period Ending 31 January 1968 (RCS CSFOR-65)

HQ, US Army, Pacific, APO San Francisco 96558 29 MAR 1968

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorsements and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

K. F. OSBOURN
MAJ, AGC
Asst AG

UNCLASSIFIED
Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author) OACSFOR, DA, Washington, D.C. 20310	2a. REPORT SECURITY CLASSIFICATION For Official Use Only 2b. GROUP Can: 1 Jan 1970

3. REPORT TITLE

Operational Report - Lessons Learned, Headquarters, 62d Engineer Battalion

4. DESCRIPTIVE NOTES (Type of report and inclusive dates)

Experiences of unit engaged in counterinsurgency operations, 1 Nov 67-31 Jan 1968

5. AUTHOR(S) (First name, middle initial, last name)

CO, 62d Engineer Battalion

6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
31 January 1968	25	

8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)
b. PROJECT NO. N/A	681227
c.	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)
d.	

10. DISTRIBUTION STATEMENT

11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY
N/A	OACSFOR, DA, Washington, D.C. 20310

13. ABSTRACT

DD FORM 1473